

Regulatory Approvals

- FCC Class A
- UL 1950
- CSA C22.2 No. 950
- EN60950
- CE
 - EN55022 Class B
 - EN50082-1

Canadian EMI Notice

This Class A digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the commission of the European Community. Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) - Radio Frequency Interference
- EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity
- EN60950 (IEC950) - Product Safety

Five-Year Limited Warranty

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For prompt response when calling for service information, have the following information ready:

- Product serial number and rev.
- Date of purchase
- Vendor or place of purchase

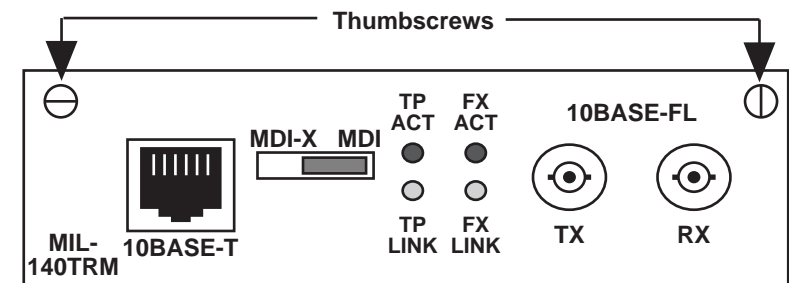
You can reach MiLAN technical support at 408/744-2751
Or E-mail at: support@milan.com



Address: 1299 Orleans Drive
Sunnyvale, CA 94089
Voice: 408/744-2775
Fax: 408/744-2793
Web: www.milan.com



MIL-140CRM and MIL-140TRM 10BASE-FL to 10BASE-T Media Converter for MiLAN's Media Conversion System



Installation Guide

This guide includes the following:

- “Introduction” on page 2
- “Installation” on page 3
- “MDI-X/MDI” on page 3
- “Link Sentry Configuration” on page 5
- “Indicators” on page 6

About this Manual

This document covers both the MIL-140CRM and the MIL-140TRM media converter modules. The terms “MIL-140” and “converter” are used throughout this document to describe these devices.

Introduction

The MIL-140 converters are part of a series of modules designed to be installed into MiLAN's Media Conversion System. These half-/full-duplex devices convert Ethernet optical signals to electrical and vice-versa.

The converter has a signal capability of transmitting up to 2 km (subject to fiber budget and collision domain restrictions). This module also has the Link Sentry feature.

Features

- One RJ-45 (UTP) connector
- One multi-mode, SC or ST fiber connector
- Link Sentry feature
- Diagnostic LEDs
- Management ready—supplied by MiLAN's optional SNMP modules (MIL-4650 and MIL-4655)
- Power supply equipped on the rack mount chassis

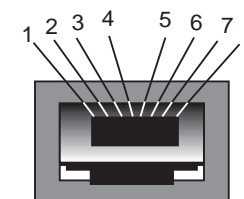


Figure 2. RJ-45 Pinouts

Fiber Specifications: SC and ST Connector

- 850 nm multi-mode fiber
- 62.5/125 multi-mode fiber
- Launch power: -19 dBm
- Receive sensitivity: -34 dBm

Operating Conditions

Table 2: Recommended Operation Conditions

Parameters	Minimum	Maximum
Operating Temperature	+5° C	+50° C
Humidity: Non-condensing	10%	95%
Signal Output Load	35 ohm	75 ohm
Supply Voltage	4.75 V	5.25 V

Indicators

There are four LEDs, including:

- **TP/ACT:** Receiving packets from the 10BASE-T port
- **TP/LINK:** There is an active connection on the 10BASE-T port
- **FX/LINK:** There is an active connection on the 10BASE-FL port
- **FX/ACT:** Receiving packets from the 10BASE-FL port

Specifications

RJ-45: MDI

- Pin 1 = Transmit Data +
- Pin 2 = Transmit Data -
- Pin 3 = Receive Data +
- Pin 6 = Receive Data -

RJ-45: MDI-X

- Pin 1 = Receive Data +
- Pin 2 = Receive Data -
- Pin 3 = Transmit Data +
- Pin 6 = Transmit Data -

Installation

Do the following to install the MIL-140 into a rack mount chassis:

1. Make any configuration changes to the module (i.e., DIP switch settings).
2. Remove the screws securing the faceplate and remove it from the chassis.
3. Slide the module into the slot through the guide rails.
4. Insert the module into the card-edge connector (port bay). Make sure it is seated firmly.
5. Secure the module with the two thumbscrews located on the faceplate of the unit.

The unit is now ready for network connections.

MDI-X/MDI Switch

The MDI-X/MDI switch allows for quick configuration of the 10BASE-T port. Cables used when the switch is in the MDI-X position (the “left” position):

- For a hub/repeater, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2)
- For a workstation/PC, use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6)

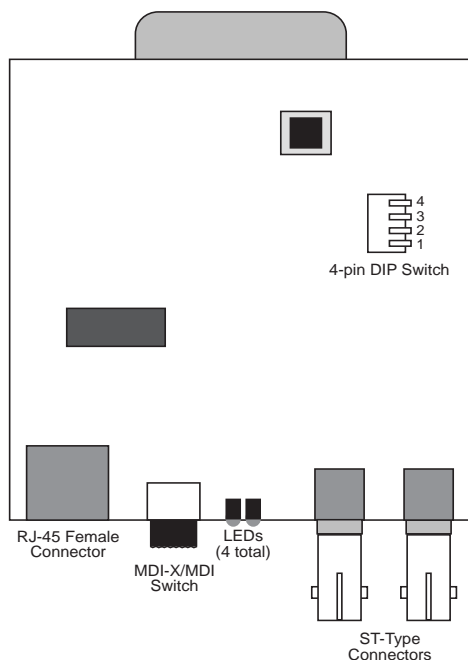


Figure 1. Inside of the MIL-140

Cables used when the switch is in the MDI position (the “right” position):

- For a hub/repeater, use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6)
- For a workstation/PC port, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2)

Link Sentry Configuration

The Link Sentry feature on the MIL-140 is configured through the 4-position DIP switch (refer to Figure 1). Default setting for the DIP switches: All switches are in the “up” position.

Link Sentry allows users to add new management tools to the network. When enabled, it monitors the selected receiver port and, if the Link test signal is not seen, the unit will stop sending a signal through the selected transmit port.

The following table shows which Link Sentry feature is enabled:

Table 1. Link Sentry Features

Switch	Losing Link on RX of	Stop sending Link on TX of
1 (down)	Fiber port	Fiber port
2 (down)	UTP port	UTP port
3 (down)	UTP port	Fiber port
4 (down)	Fiber port	UTP port

Note: For two MIL-140s used back-to-back and UTP-to-UTP, all DIP switches must be enabled (in the “down” position) on the first MIL-140. On the second MIL-140, enable switches 1 and 4 (in the “down” position).

Default setting for Link Sentry: All switches set in the “up” position (disabled). When using the SNMP module to control the Link Sentry feature, leave the switches in the default mode (“up”).